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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/651,754	08/30/2000	Michael E. Campbell	20-0139	2627

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EXAMINER	
HARRY, ANDREW T	
ART UNIT	**PAPER NUMBER**
2684	2

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/651,754 ~~09/651,753~~	Applicant(s) TREMPALA, DOHN J.	
	Examiner Andrew T Harry	Art Unit 2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 August 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1- 22 are rejected under 35 U.S.C. 102(e) as being anticipated by ***Phillips et al*** **U.S. Patent 6,072,994** ("*Phillips*").

As pertaining to **claim 1**, *Phillips* teaches a transceiver-processor building block for an electronic radio system multifunction "slice" (based on the language in the specification, the examiner interprets slice to simply mean a grouping of radio resources), the building block comprising (see *Phillips*, abstract):

a plurality of transceivers (see *Phillips*, Fig. 3 and col. 15 lines 55-63);

a processor coupled to the transceivers (see *Phillips*, Fig. 3 and col. 15 lines 55-63);

a local RF control bus 326 inaccessible directly from outside the multifunction slice and coupled between the processor and the transceivers (see *Phillips*, Fig. 3 and col. 28 lines 15-36);

a radio network bus coupled to the processor 324 (see *Phillips*, Fig. 3); and

a radio network bus connector coupled to the radio network bus to provide direct accessibility to the radio network bus from outside the multifunction slice (see *Phillips*, Fig. 3, on the right of the figure *Phillips* shows various applications connected to the bus that may be used to provide access to the multifunction slice).

As pertaining to **claim 2**, *Phillips'* block further comprises an external control bus coupled to the processor and an external control bus connector providing direct accessibility to the external control bus from outside the radio resources (see *Phillips*, Fig. 3, on the right of the

figure *Phillips* shows various applications connected to the bus that may be used to provide access to the multifunction slice).

As pertaining to **claim 3**, in *Phillips'* building block the external control bus carries antenna configuration data that may be relevant in reconfiguring the antenna interface unit (AIU) (see *Phillips*, Fig. 3 and col. 26 lines 49-61).

As pertaining to **claim 4**, in *Phillips'* building block the external control bus carries antenna interferometer configuration and beamforming data (see *Phillips*, Fig. 3 and col. 26 line 37-col. 27 lines 35, *Phillips* describes that based on the type of application being used the AIU must change various signal transmission parameters).

As pertaining to **claim 5**, in *Phillips'* building block the radio network bus transfers transmission coordination data and voice and user data into and out of the building block (see *Phillips*, Fig. 3, co9l. 22 lines 33-61 and col. 26 line 37-col. 27 lines 35).

As pertaining to **claim 6**, in *Phillips'* building block the local RF control bus carries tuning data for the plurality of transceivers (see *Phillips*, col. 26 lines 49-61).

As pertaining to **claim 7,** in *Phillips'* building block the local RF control bus carries intermediate frequency bandwidth information and intermediate frequency gain characteristics for the plurality of transceivers (see *Phillips*, col. 26 line 37-col. 28 line 7).

As pertaining to **claim 8**, in *Phillips'* building block the radio network bus carries unencrypted information and is isolated from the local RF control bus (see *Phillips*, Fig. 3, it can be clearly seen in Fig 3 of *Phillips* that all information submitted through the network bus 324 passes through INFOSEC modules and isolated from the RF control bus).

As pertaining to **claim 9**, in *Phillips*' building block the radio network bus is isolated from the RF control bus with electromagnetic shielding (see *Phillips*, Fig. 3 and col. 33 lines 33-47).

As pertaining to **claim 10**, in *Phillips*' building block the processor includes encryption and decryption support 314, 318, etc. for each transceiver in the plurality of transceivers (see *Phillips*, Fig. 3 and col. 42 lines 12-22).

As pertaining to **claim 11**, in *Phillips*' building block the processor includes multilevel security software to control the routing of data (see *Phillips*, col. 43 lines 5-14 and col. 45 line 17-col. 46 line 61).

As pertaining to **claim 12**, *Phillips*' building block also includes encryption and decryption circuitry coupled to the processor for each transceiver in the plurality of transceivers (see *Phillips*, Fig. 3 and col. 45 line 17-col. 46 line 61).

As pertaining to **claim 13**, in *Phillips*' building block the local RF control bus carries control data from the processor to the transceivers (see *Phillips*, Fig. 3 and col. 27 lines 45-63).

As pertaining to **claim 14**, *Phillips* teaches a radio system multifunction "slice" (based on the language in the specification, the examiner interprets slice to simply mean a grouping of radio resources) for supporting a predetermined number of communication threads (see *Phillips*, abstract), the multifunction slice comprising:

an RF aperature switch/transmitter interface 306 (see *Phillips*, Fig. 3);

a plurality of transceivers 308 coupled to the RF aperture switch/transmitter interface 306 (see *Phillips*, Fig. 3 and col. 15 lines 55-63);

a processor coupled to the transceivers 310, 312, etc. (see *Phillips*, Fig. 3 and col. 15 lines 55-63);

a local RF control bus 326 inaccessible directly from outside the multifunction slice and coupled between the processor, the transceivers, and the RF aperture/transmitter interface (see *Phillips*, Fig. 3 and col. 28 lines 15-36);

a radio network bus coupled to the processor 324 (see *Phillips*, Fig. 3); and

a radio network bus connector coupled to the radio network bus to provide direct accessibility to the radio network bus from outside the multifunction slice (see *Phillips*, Fig. 3, on the right of the figure *Phillips* shows various applications connected to the bus that may be used to provide access to the multifunction slice).

an avionics interface coupled to the processor, the avionics interface providing a core avionics network output and a core avionics network input (see *Phillips*, Fig. 8 and col. 60 lines 26-60).

As pertaining to **claim** 15, *Phillips'* slice further comprises an external control bus coupled to the processor and an external control bus connector providing direct accessibility to the external control bus from outside the radio resources (see *Phillips*, Fig. 3, on the right of the figure *Phillips* shows various applications connected to the bus that may be used to provide access to the multifunction slice).

As pertaining to **claim 16**, in *Phillips'* radio slice the local RF control bus is restricted to carrying control data information between the processor, the transceivers, and the RF aperture switch/transmitter interface (see *Phillips*, Fig. 3 and col. 26 lines 10-15).

As pertaining to **claim 17**, in *Phillips*' slice the radio network bus carries unencrypted information and is isolated from the local RF control bus (see *Phillips*, Fig. 3, it can be clearly seen in Fig 3 of *Phillips* that all information submitted through the network bus 324 passes through INFOSEC modules and isolated from the RF control bus).

As pertaining to **claim 18**, in *Phillips'* slice the radio network bus transfers transmission coordination data (see *Phillips*, Fig. 3 and col. 26 line 37-col. 27 lines 35, *Phillips* describes that based on the type of application being used the AIU must change various signal transmission parameters), and user data into and out of the building block (see *Phillips*, Fig. 3, col. 22 lines 33-61 and col. 26 line 37-col. 27 lines 35), and the local RF control bus carries tuning data for the plurality of transceivers (see *Phillips*, col. 26 lines 49-61), and carries intermediate frequency bandwidth information and intermediate frequency gain characteristics for the plurality of transceivers (see *Phillips*, col. 26 line 37-col. 28 line 7).

As pertaining to **claim 19**, *Phillips* teaches a method for operating a transceiver-processor building block in an electronic radio system multifunction slice, the method comprising:

providing a plurality of transceivers coupled to a processor (see *Phillips*, Fig. 3 and col. 15 lines 55-63);

communicating unencrypted data to the processor over a radio network bus coupled to the processor (see *Phillips*, col. 45 lines 38-51), the radio network bus coupled to a radio network bus connector providing direct accessibility to the radio network bus from outside the multifunction slice (see *Phillips*, Fig. 3 and col. 47 lines 15-37);

processing the unencrypted data to form encrypted user data and control data (see *Phillips*, col. 46 lines 7-61); and

communicating the control data to the transceivers over a local RF control bus between the processor and the transceivers 326(see *Phillips*, Fig. 3 col. 26 lines 49-61), the local RF control bus inaccessible directly from outside the multifunction slice, and communicating the user data to the transceivers over bi-directional baseband interfaces (see *Phillips*, Fig. 3, col. 22 lines 33-61).

As pertaining to **claim 20**, *Phillips'* method further comprises the step of communicating antenna configuration data over an external control bus coupled to the local RF control bus to an antenna outside the multifunction slice (see *Phillips*, col. 26 line 49-col. 27 line 35).

As pertaining to **claim 21**, *Phillips'* method further comprises the step of electrically isolating the network bus from the local RF control bus (see *Phillips*, Fig. 3 and col. 33 lines 33-47).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

B. Takano U.S. Patent 6,002,924 teaches a full-spectrum all-mode radio receiver apparatus and method.

C. Kelley et al. U.S. Patent 5,280,636 teaches a multi-band digital receiving apparatus and method with bandwidth reduction.

D. Milton, Jr. U.S. Patent 5,640,694 teaches an integrated RF system with segmented frequency conversion.

E. Yee et al. U.S. Patent 6,147,980 teaches an avionics satellite based data message routing and delivery system.

F. Hessel et al. U.S. Patent 6,389,078 teaches configurable circuits for field programmable radio frequency communications equipment and methods therefor.

G. Hessel et al. U.S. Patent 6,343,207 teaches a field programmable radio frequency communications equipment including a configurable IF circuit, and method therefor.

H. Phillips et al. U.S. Patent 5,867,535 teaches a common transmit module for a programmable digital radio.

I. Phillips et al. U.S. Patent 5,712,628 teaches digitally programmable radio modules for transponder systems.

J. Phillips et al. U.S. Patent 5,859,878 teaches a common receive module for a programmable digital radio.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T Harry whose telephone number is 703-305-4749. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Hunter can be reached on 703-308-6732. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

09/651,754

ATH
February 12, 2003

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PRIMARY EXAMINER 2/14/03

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